West Valley Environmental Services

Lean Six Sigma Approach to Work Control Process Improvements at the WVDP

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Overview of Process Improvement Initiative

West Valley Demonstration Project
WVES LLC

◆ **OBJECTIVE:**

Apply lean techniques to streamline and improve the Work Control/ Work Instruction Package (WIP) process to make it less cumbersome and more efficient without compromising safety

◆ **GOALS:**

— Eliminate wasted effort and maximize effectiveness of EP-5-002
— Ensure the effort required is commensurate with degree of difficulty
— Accelerate WIP preparation, where appropriate
— Improve the quality of WIPs
— Ensure safety is not compromised (and possibly even improve it)
— Establish metrics/measurement system to confirm benefits
— Demonstrate the value of lean techniques for process improvement

— Strengthen worker and supervisor involvement during WIP process
— Strengthen supervisor familiarity with WIP before it gets implemented

Original Recommendations

⭐**1** Provide **additional work control options and guidance** to better match extent of controls with complexity and hazards. Improve definitions and examples to support decisions concerning the appropriate work control method to use; e.g., routine work, Service Requests, SOPs, WIPs.

⭐**2** Strengthen WIP **walk down process** for obtaining Work Group input, assessing hazards, and determining work control needs (applies to both initial walk down and final walk down). User input is not always adequately obtained (due to time and work load pressures). Also, individuals who provide early input may not be the ones who will actually do the work – causing WIP changes later.

⭐**3** Streamline **WRG review and signature approval** process. WRG input often requires changes to the WIP. Signature process is cumbersome and often involves a lot of non-value added time and effort to obtain the required signatures. Minimize the late breaking surprises (e.g., new requirements after WIP has been issued) that significantly change or delay work.

⭐**4** Enhance **hazard analysis process** to streamline WIP development, strengthen hazards mitigation, and clearly communicate how specific hazards will be mitigated.

⭐**5** Improve the way **crisis WIPs** (i.e., ones that must be done quickly and therefore tend to circumvent the normal process) are handled.

⭐**6** Improve overall capabilities across the population of **WIP writers** to produce higher quality WIPs with less effort and minimum rework.

⭐**7** Improve **task readiness** through better availability and timing of paperwork, materials, and resources needed to do the job.

⭐**8** Improve scheduling process and use of **scheduling Information** to make WIP process more efficient, encourage critical input early.
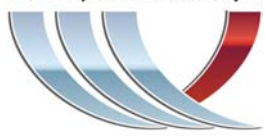
Roll Out Plan

◆ Roll Out Plan Overview

The roll out plan for the work control improvements consists of three phases:

- **Phase 1 – Document Update/Finalization**

- **Phase 2 – Orientation and Training**

- **Phase 3 – Implementation and Oversight**
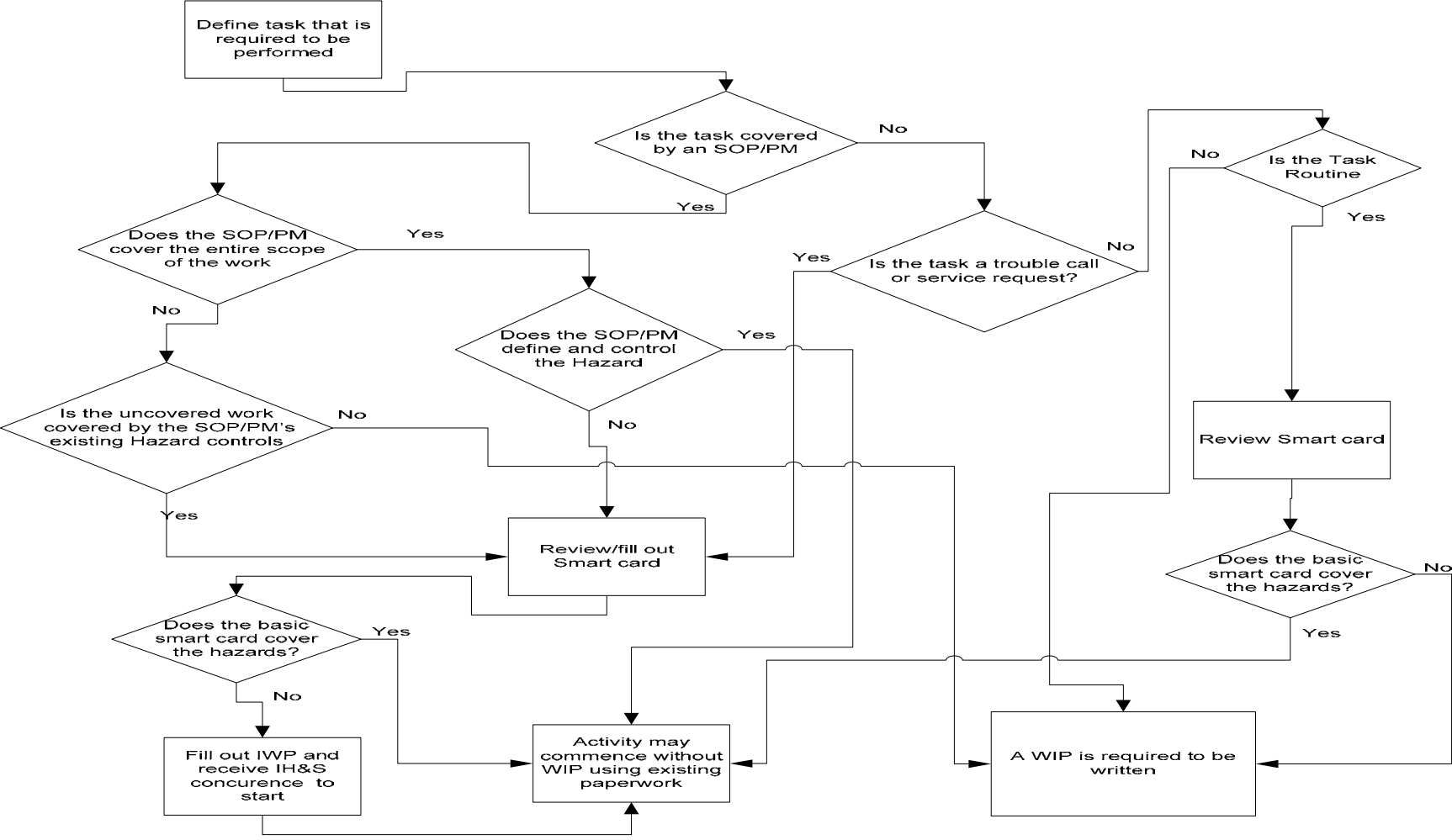
Roll Out Plan Phases Overview

PHASE 1 Document Update/Finalization	PHASE 2 Orientation and Training	PHASE 3 Implementation and Oversight

- Create/Update and Issue:
  ➢ New WVDP Work Control Governing Procedure
  ➢ EP-5-002 (WIPs)
  ➢ WV-128 (Work Review Group)
  ➢ SOP-0046 (Walkdowns/Checklists)
  ➢ WV-921, WV-3909, and Hazards Training
- Develop Orientation and Training Materials:
  ➢ Operations Familiarization
  ➢ Upper Management Briefing
  ➢ Core Training for WIP Writers and Others
  ➢ Hazards Specialists Briefing
- Determine Metrics
  ➢ Finalize Metrics Selection
  ➢ Establish Metrics Baseline
	- Brief DOE on plans
	- Conduct Upper Management Briefing
	- Conduct Operations Familiarization Briefings
	- Conduct Core Training for WIP Writers, Group Supervisors, and Work Coordinators
	- Conduct Briefing with Hazard Specialists
		- Assess effectiveness of initial implementation
		- Conduct regular meetings with WIP writers (every other Friday)
		- Obtain and analyze feedback from the WRG
		- Obtain and analyze feedback from the Work Coordinators
		- Obtain and analyze feedback forms from Operations
		- Interview Project Managers and obtain feedback
		- Gather metrics and publish results
		- Initiate effort to build a Hazards Mitigation Library

• **MARCH/APRIL 2008**	• **MAY 2008**	• **JUNE 2008 & BEYOND**

Old Process

Decision tree for Proper work authorization

Routine is defined as low risk low hazard work that is repeated regularly, has low potential of worker exposure to hazards and is within recognized skill of the craft attributes

Old Process

Decision tree for Proper work authorization

Define task that is required to be performed

Is the task covered by an SOP/PM — No → Is the Task Routine

Does the SOP/PM cover the entire scope of the work — Yes

Is the task a trouble call or service request?

Does the SOP/PM define and control the Hazard

Is the uncovered work covered by the SOP/PM's existing Hazard controls

Review Smart card

Review/fill out Smart card

Does the basic smart card cover the hazards?

Does the basic smart card cover the hazards?

Fill out IWP and receive IH&S concurence to start

Activity may commence without WIP using existing paperwork
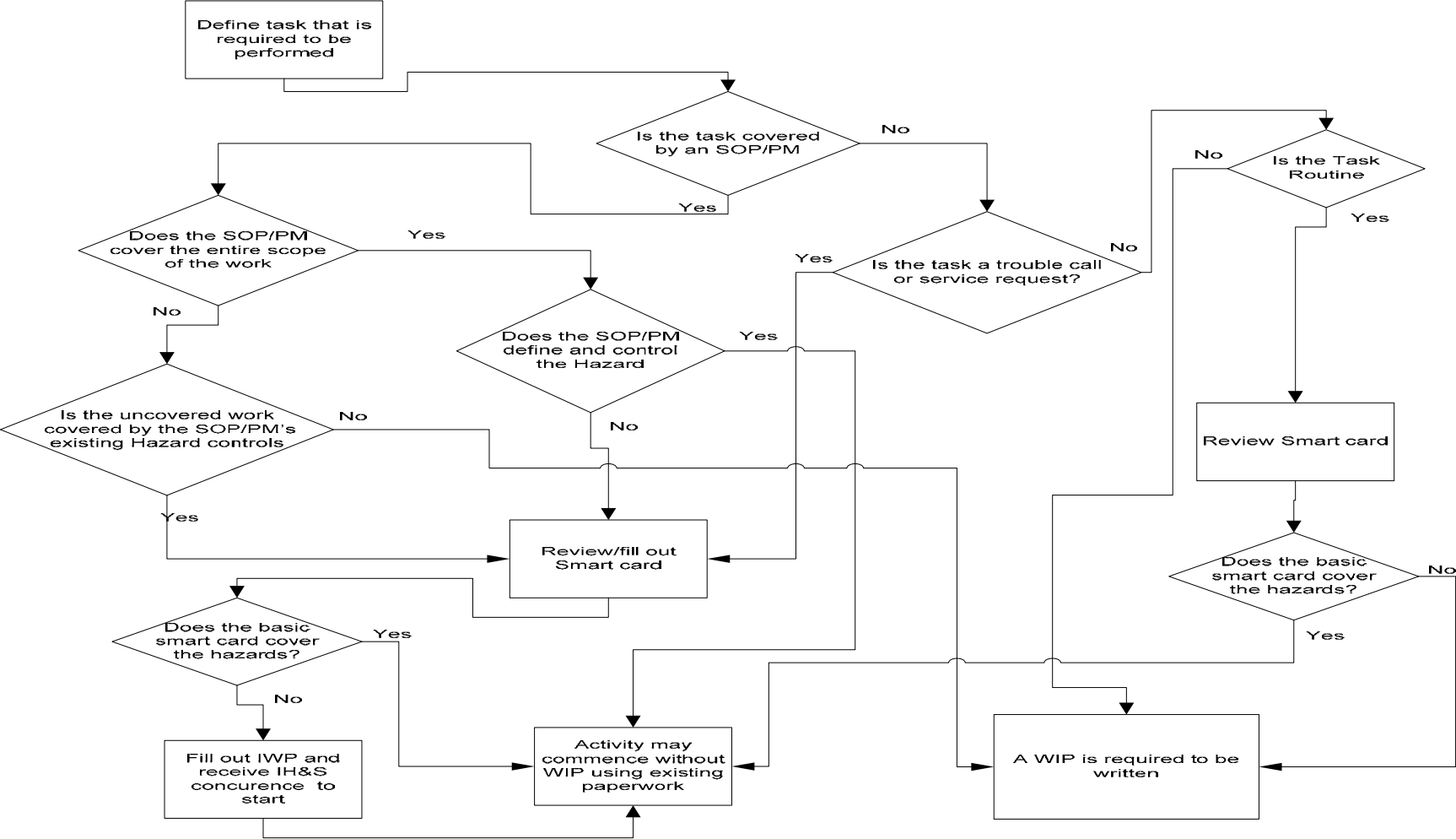
A WIP is required to be written

Routine is defined as low risk low hazard work that is repeated regularly, has low potential of worker exposure to hazards and is within recognized skill of the craft attributes

New Process

Define the work to be performed

Is work covered by an SOP or PM?
- No → **Is work a trouble call or service request?**
- Yes → (Developed per DCIP-100, or WV-108/109) → **Use SOP/PM with any required permits**

Is work a trouble call or service request?
- No → **Is this routine work?**
- Yes → **Develop Service Request per SOP 00-12** → **Use Service Request with SMART Card and any required permits**

Is this routine work?
- No → **Conduct work scoping and hazards screen**
- Yes → **Does the SMART Card cover the hazards?**

Does the SMART Card cover the hazards?
- No → **Is this Low Risk Routine Work?**
- Yes → **Supervisor verbally assigns work with SMART Card**

Is this Low Risk Routine Work?
- No → **Conduct work scoping and hazards screen**
- Yes → **Supervisor verbally assigns work with permits needed**

Conduct work scoping and hazards screen → **Does Work meet WIP Type 2 criteria?**

Does Work meet WIP Type 2 criteria?
- Yes → **Obtain WRG confirmation for Type 2** → **Develop Type 2 WIP per EP-5-002** → **Use Type 2 WIP with any required permits**
- No → **Develop Type 1 WIP per EP-5-002** → **Use Type 1 WIP with any required permits**

Perform Work